

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (canceled).

Claim 2 (currently amended). The micro-mixer Micro-mixer according to Claim 314,
wherein the at least one slotted plate comprises additional slot openings and/or
the aperture plate comprises additional aperture slots.

Claim 3 (canceled).

Claim 4 (currently amended). The micro-mixer Micro-mixer according to claim 314,
wherein the ~~at least one~~ first and the ~~at least one~~ second slot openings in the at
least one slotted plate are configured so that the first and second fluid phases
enter the at least one aperture slot of the aperture plate or an additional slotted
plate located above.

Claim 5 (currently amended). The micro-mixer Micro-mixer according to claim 314,
wherein ~~a~~ the continuous opening of the at least one ~~aperture-slot-shaped~~
~~aperture opening~~ of the aperture plate overlaps the ~~at least one~~ first and ~~the at~~
~~least one~~ second slot openings in the at least one slotted plate, wherein the first
and second fluid phases come into contact with one another in the continuous
opening of the at least one ~~aperture-slot-shaped~~ ~~aperture opening~~ of the aperture
plate.

Claim 6 (canceled).

Claim 7 (currently amended). The micro-mixer ~~Micro-mixer~~ according to claim 311,
wherein the ~~at least one~~ first and the ~~at least one~~ second slot openings in the at
least one slotted plate are arranged obliquely in relation to one another.

Claim 8 (currently amended). The micro-mixer ~~Micro-mixer~~ according to claim 311,
wherein a top view of the ~~at least one~~ first and the ~~at least one~~ second slot
openings in the at least one slotted plate is configured in the shape of a funnel or
lobe.

Claim 9 (currently amended). The micro-mixer ~~Micro-mixer~~ according to claim 311,
further comprising a plurality of additional slotted plates located adjacent to the at
least one slotted plate and/or a plurality of additional aperture plates located
adjacent to the aperture plate, wherein the pluralities of additional slotted plates
and/or additional aperture plates are arranged directly above one another or
offset with respect to one another.

Claim 10 (currently amended). The micro-mixer ~~Micro-mixer~~ according to claim 21,
further comprising a plurality of support structures fitted to the upper housing
part.

Claim 11 (canceled).

Claim 12 (canceled).

Claim 13 (currently amended). The micro-mixer ~~Micro-mixer~~ according to claim 311,
further comprising additional slot-shaped aperture openings ~~slots~~ in the aperture
plate, wherein the additional slot-shaped aperture openings ~~slots~~ are offset
parallel to one another and/or are arranged in a periodic pattern with respect to
one another.

Claim 14 (currently amended). The micro-mixer ~~Micro-mixer~~ according to claim 311, wherein the ~~at least one~~ first and the ~~at least one~~ second slot openings in the at least one slotted plate and the at least one slot-shaped aperture opening ~~slot~~ in the aperture plate are arranged at an angle with respect to one another.

Claim 15 (currently amended). The micro-mixer ~~Micro-mixer~~ according to claim 311, wherein the ~~at least one~~ first and the ~~at least~~ second slot openings in the at least one slotted plate and the at least one slot-shaped aperture opening ~~slot~~ in the aperture plate have a width of less than 500 µm.

Claim 16 (currently amended). The micro-mixer ~~Micro-mixer~~ according to claim 311, wherein the at least one slotted and aperture plates are formed, partly or completely, of metal, glass, ceramic or plastic or of a combination of these materials.

Claim 17 (canceled).

Claim 18 (currently amended). The micro-mixer ~~Micro-mixer~~ according to claim 311, wherein the at least one slotted and aperture plates comprise a stack of micro-structured thin plates.

Claim 19 (currently amended). The micro-mixer ~~Micro-mixer~~ according to Claim 18, wherein the thin micro-structured plates are connected materially by means of soldering, welding, diffusion welding or adhesive bonding or with a force fit by means of screwing, pressing or riveting.

Claim 20 (currently amended). The micro-mixer ~~Micro-mixer~~ according to claim 311, wherein the at least one slot-shaped aperture opening ~~slot~~ in the aperture plate and the ~~at least one~~ first and the ~~at least one~~ second slot openings in the at least one slotted plate are of branched configuration.

Claim 21 (currently amended). The micro-mixer Micro-mixer according to claim 311,
wherein the micro-mixer further comprises an upper is accommodated in a
housing part.

Claim 22 (currently amended). The micro-mixer Micro-mixer according to claim 21,
wherein the lower housing part is configured to contains the at least one first and
second feed channels which promote spatial distribution of the first and second
fluid phases.

Claim 23 (currently amended). The micro-mixer Micro-mixer according to claim 3122,
wherein the at least one first and second feed channels are arranged offset
parallel from one another, radially, concentrically or behind one another in order
to distribute the first and second fluid phases in the lower housing part.

Claim 24 (currently amended). The micro-mixer Micro-mixer according to claim 3122,
wherein the at least one first and second feed channels are designed with
constant or variable cross sections in order to distribute the first and second fluid
phases in the lower housing part.

Claim 25 (canceled).

Claim 26 (currently amended). The micro-mixer Micro-mixer of claim 15, wherein the
width is less than 100 10 µm.

Claim 27 (currently amended). The method of claim 3325, further comprising:
producing the at least one slotted plate and/or the aperture plate by
punching, embossing, milling, erosion, etching, plasma etching, laser cutting or a
LIGA technique.

Claim 28 (currently amended). The micro-mixer Micro-mixer of claim 314, wherein
the at least one slot-shaped aperture opening slot of the aperture plate is located

between the ~~at least one~~ first and the ~~at least one~~ second slot openings of the at least one slotted plate.

Claim 29 (currently amended). The micro-mixer ~~Micro-mixer~~ of claim 14, wherein the angle is up to 90°.

Claim 30 (canceled).

Claim 31 (new). A static lamination micro-mixer for mixing, dispersing, emulsifying or suspending at least first and second fluid phases, the micro-mixer comprising:
a lower housing part having a first feed channel for the first fluid phase and a second feed channel for the second fluid phase, wherein the first and second feed channels have partial openings on an upper side of the lower housing part;

at least one slotted plate resting on the lower housing part and having first slot openings and second slot openings, wherein the first and second slot openings completely penetrate the slotted plate and are arranged in pairs;

an aperture plate resting on the slotted plate and having at least one slot-shaped aperture opening, wherein the at least one aperture opening completely penetrates the aperture plate; and

a mixing chamber located above the aperture plate,
wherein one end of the first slot openings of each pair is in direct fluidic contact with the first feed channel in the lower housing part and one end of the second slot openings of each pair is in direct fluidic contact with the second feed channel in the lower housing part, wherein the first and second slot openings overlap the aperture opening in the aperture plate,

wherein an overlap between the partial openings on the upper side of the lower housing part, the first and second slot openings in the slotted plate and the aperture opening in the aperture plate is nonidentical in a vertical projection onto the slotted plate, such that

a first continuous, at least twice deflected, fluid pathway is formed from the first feed channel in the lower housing part, through the first slot openings of each pair in the slotted plate, to the mixing chamber located above the aperture plate, and

a second continuous, at least twice deflected, fluid pathway is formed from the second feed channel in the lower housing part, through the second slot openings of each pair in the slotted plate, to the mixing chamber located above the aperture plate.

Claim 32 (new). The micro-mixer according to claim 31, wherein the at least one first and second feed channels are designed with constant cross sections in order to distribute the first and second fluid phases in the lower housing part.

Claim 33 (new). A method for mixing, dispersing, emulsifying or suspending at least first and second fluid phases, the method comprising:

providing a lower housing part having a first feed channel for the first fluid phase and a second feed channel for the second fluid phase, wherein the first and second feed channels have partial openings on an upper side of the lower housing part;

leading the first fluid phase from the partial opening of the first feed channel through first slot openings of at least one slotted plate and into at least one slot-shaped aperture opening in an aperture plate, wherein the at least one slotted plate rests on the lower housing part, wherein the aperture plate rests on the slotted plate and the at least one slot-shaped aperture opening completely penetrates the aperture plate;

leading the second fluid phase from the partial opening of the second feed channel through second slot openings of the at least one slotted plate and into the at least one slot-shaped aperture opening in the aperture plate, wherein the first and second slot openings completely penetrate the at least one slotted plate and are arranged in pairs, wherein one end of the first slot openings of each pair is in direct fluidic contact with the first feed channel in the lower housing part and

one end of the second slot openings of each pair is in direct fluidic contact with the second feed channel in the lower housing part, wherein the first and second slot openings overlap the aperture opening in the aperture plate, wherein an overlap between the partial openings on the upper side of the lower housing part, the first and second slot openings in the slotted plate and the aperture opening in the aperture plate is nonidentical in a vertical projection onto the slotted plate;

forming a first continuous, at least twice deflected, fluid pathway from the first feed channel in the lower housing part, through the first slot openings of each pair in the slotted plate, to the at least one slot-shaped aperture opening of the aperture plate; and

forming a second continuous, at least twice deflected, fluid pathway from the second feed channel in the lower housing part, through the second slot openings of each pair in the slotted plate, to the at least one slot-shaped aperture opening of the aperture plate.